

**Notice of Allowability**

Application No.

10/698,832

Examiner

Geoffrey L. Knable

Applicant(s)

CAVALOTTI ET AL.

Art Unit

1733

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed 10-31-2003.
2. ☒ The allowed claim(s) is/are 8-12.
3. ☒ The drawings filed on 31 October 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 10-31-2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Howard M. Cohn on August 5, 2005.

The application has been amended as follows:

In the specification:

At page 1, the paragraph at lines 6-7 of the specification has been amended as follows:

--This is a Divisional application of U.S. application Serial No. 09/952,635, now Patent No. 6,676,787, having a filing date of September 14, 2001 and a common assignee with the present application.--

In the claims:

The claims have been amended as follows<sup>1</sup>:

1-7 (canceled).

8. (currently amended) Apparatus for controlling the amount of perforated surface area though which air can be drawn by suction through perforations extending through a surface of a hollow cylindrical drum having an inner surface, the cylindrical

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<sup>1</sup> It is noted that this amendment also incorporates the changes from the 10-31-2003 preliminary amendment as this amendment was not signed and therefore was apparently not proper for entry.

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drum being closed at opposite ends to prevent air flow into the drum through the opposite ends, a circumference and an axis of revolution, characterized by comprising:

a circumferentially moveable cylindrically curved element disposed inside the hollow cylindrical drum and having an axis of rotation contiguous with the axis of the hollow cylindrical drum and having a length less than a length of a cylindrical volume inside the hollow cylindrical drum, the curved element conforming to the inner surface of the perforated cylindrical drum and having an outermost radius of curvature about equal to a radius of curvature of the inner surface of the hollow perforated cylindrical drum, whereby circumferential positioning of the curved element controls the amount of perforated surface area; and

axially moveable baffle plates disposed inside the drum to control a width of a portion of the perforated surface between the baffle plates through which air can be drawn, each baffle plate having a radius of curvature less than the radius of curvature of the inner surface of the perforated cylindrical drum.

9. (original) The apparatus of claim 8 characterized in that the circumferentially moveable cylindrically curved element has an arc width in the range of about 60 degrees to about 120 degrees with respect to the axis of rotation of the cylindrically curved element.

10. (currently amended) The apparatus of claim 9 characterized in that the circumferentially moveable cylindrically curved element has an arc width in the range of about 80 degrees to about 90 degrees with respect to the axis of rotation of the cylindrically curved element.

11. (currently amended) The apparatus of claim 9 characterized in that each of the axially moveable ~~circular barriers~~ baffle plates disposed inside each opposing end of the perforated cylindrical drum has a perimeter seal made of felt or other suitable material to block the movement of air around the perimeter of each of the two moveable ~~circular barriers~~ baffle plates.

12. (currently amended) The apparatus of claim 9 characterized in that:  
each of the axially moveable ~~circular barriers~~ baffle plates disposed inside each opposing end of the perforated hollow cylindrical drum are able to be moved towards or away from each other to vary the width of a central perforated surface area through which air can be drawn to provide an outer suction adhering surface on the perforated hollow cylindrical drum.

Summary of above-noted August 5, 2005 Interview: Agreement was reached on the above noted amendments in order to place this application into condition for allowance. It is noted that these amendments also incorporate the changes made in the 10-31-2003 preliminary amendment because it was not signed and therefore would not seem to be proper for entry in view of MPEP 714.01. The additional changes to claim 8 were to clarify what is being controlled. The change to claim 10 provides the originally described range from the specification since no range was present. The changes to claims 11 and 12 correct an antecedent basis ambiguity consistent with claim 8.

### Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

Among the closest prior art, Hughes et al. (US 5,669,155) discloses an apparatus for controlling the perforate suction area of a suction drum using widthwise adjustable plates (24 - note esp. figs. 5-6) that are varied in axial position towards and away from one another as well as what are described as internal semi-cylindrical masking elements (18, 19 in fig. 1) to control the circumferential extent of the vacuum. These masking means are however not described in further detail and thus there is no teaching or indication that they are circumferentially movable. Further, even if they were made circumferentially movable, the circumferential position thereof is not designed or adapted to control the *amount* of perforate suction area as claimed but rather simply the *location* of the semi-cylindrical portion that is to be masked. Likewise, Thagard, Jr. (US 3,752,639) discloses controlling the perforate suction area of a suction drum using widthwise-adjustable plates (90, 91) that are varied in axial position towards and away from one another as well as baffle plates (80, 81 in fig. 3) that block off part of the circumference of the drum. These plates are however not in the form of a circumferentially movable curved element as claimed.

Walsh et al. (US 4,541,156) discloses a suction drum including two axially adjustable disk like baffles to control the width of applied suction and thus would suggest varying their axial position as claimed - note esp. col. 3, lines 30-34. A circumferentially movable curved element whose circumferential position controls the amount of perforated surface area is not however suggested.


JP 56-23147 to Ricoh (note movable plate 25) and Madsen et al. (US 6,209,867 - note movable sleeve 413 which in light of col. 6, lines 52+ may be movable circumferentially) each disclose controlling the perforate area of a suction drum by using or positioning a circumferentially movable internal element. Axially movable baffle plates as claimed are not however taught or obvious in these references. It is noted especially that in Madsen, the internal sleeve desirably moves axially (and/or rotationally as noted), and completely controls the vacuum pattern itself, it being considered that the ordinary artisan would have viewed this as inconsistent with any need for axially movable baffle plates as claimed. Further, contrary to the present claims, it is noted that the circumferentially movable element in JP '147 has a length greater than the length of the cylindrical volume of the drum (note esp. fig. 2 and 3).

None of the closest prior art, then, whether taken singly or in combination, would teach or render obvious an apparatus as claimed.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Geoffrey L. Knable  
Primary Examiner  
Art Unit 1733

G. Knable  
August 6, 2005